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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,865	02/26/2002	Paul Gothard Knutson	PU020044	4695

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EXAMINER

NGUYEN-BA, HOANG-VU A

ART UNIT	PAPER NUMBER
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2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/083,865	Applicant(s) KNUTSON ET AL.	
	Examiner Hoang-Vu A. Nguyen-Ba	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/26/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed February 26, 2002.
2. Claims 1-14 have been examined.

Priority

3. The priority date considered for this application is February 26, 2002.

Oath/Declaration

4. The Office acknowledges receipt of a properly signed oath/declaration filed June 3, 2002 in response to a Notice to File Missing Parts of Nonprovisional Application mailed March 22, 2002.

Information Disclosure Statement

5. The Office acknowledges receipt of the Information Disclosure Statement filed February 26, 2002. It has been placed in the application file and the information referred to therein has been considered.

Drawings

6. The drawings filed February 26, 2002 are accepted by the examiner.

Specification

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.
8. The specification is objected to because of the following minor

informality: the Abstract contain more than 150 words.

Claim Objection

9. Claims 1 and 8 are objected to because of the following minor informalities: the limitation “uplink and downlink circuitry” should be changed to – uplink and downlink circuitries – since the uplink circuitry and the downlink circuitry are separate and functionally different (see FIG. 5, block 48).

Claim Rejections – 35 USC § 103

10. The following is a quotation of the 35 U.S.C. § 103(a) which form the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-5, 7-12 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,825,327 to Krasner.

Claims 1 and 8

Krasner discloses a GPS Receiver comprising at least:

tuning circuitry (see at least FIG. 1B, items 30, 31, 41) operative to tune a first satellite GPS signal (FIG. 1A, item “GPS ANTENNA 1”) and a second satellite GPS signal (FIG. 1A, item “GPS ANTENNA 2”) received from an outdoor unit of the satellite ground system;

first processing circuitry in communication with the tuning circuitry and operative to obtain carrier frequency offset data of one of the first and second satellite television signals (see at least 6:14-23; it is noted that the Dual PLL Synthesizer 42 in conjunction with the DSP IC 10 adjust the frequency of the oscillators 41 and 44 to correct the Doppler offset which is due to difference between the received carrier signal and the generated carrier frequency by the oscillators 41 and 44);

oscillator circuitry operative to generate an oscillator signal (FIG. 1B, items 41-44) ; and

second processing circuitry in communication with the first processing circuitry and the oscillator circuitry, the second processing circuitry operative to frequency stabilize the oscillator signal utilizing the obtained carrier frequency offset data, and provide the frequency stabilized oscillator signal to uplink and downlink circuitry of the outdoor satellite television signal unit (FIG. 1A, item 16 and FIG. 1B, item 42).

Krasner does not disclose that the system is a unit of television system. However, the system taught by Krasner does provide capability to track and receive two satellite signals and an uplink circuit to send signals up to the satellite (at least FIGs. 1A-B). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system taught by Krasner to receive and send television signals instead of GPS signals for the purpose of reducing the costs of additional hardware (see at least 1:31-44) needed for a consumer ground station.

Claims 2 and 9

Krasner further discloses *wherein the first processing circuitry includes a carrier tracking loop* (see at least FIG. 1B, item 42; it is noted that a phase lock loop is another term of art for carrier tracking loop).

Claims 3 and 10

Krasner further discloses *wherein the carrier tracking loop includes a loop filter having an integrator, the carrier frequency offset data obtained from the integrator* (see at least FIG. 1B, item 42; it is noted that a phase lock loop or a carrier tracking loop comprises a low pass filter which is an integrator).

Claims 4 and 11

Krasner further discloses *wherein the first processing circuitry is further operative to generate a first processing circuitry oscillator control signal* (see at least FIG. 1B, items 42, 41 and 44).

Claims 5 and 12

Krasner does not specifically disclose *wherein the first processing circuitry oscillator control signal is generated by a numerically controlled oscillator*. However, Official notice is taken that a numerically controlled oscillator is another term for a digitally controlled oscillator (DCO), which is well known in the art to be an electronic system designed for the purpose of synthesizing a range of frequencies from a fixed timebase (see Wikipedia; definition of Numerically-controlled oscillator). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the DCO for

device 42 to take advantage of the wider range of frequencies that the Dual PLL Synthesizer 42 in FIG. 1B of Krasner.

Claims 7 and 14

Does not specifically disclose *wherein the first processing circuitry is operative to obtain carrier frequency offset data of both the first and second satellite signals, and the second processing circuitry is operative to frequency stabilize the uplink oscillator signal utilizing the obtained carrier frequency offset data of both the first and second satellite signals* (see at least 6:14-23; FIG. 1A, item 16 and FIG. 1B, item 42).

Krasner does not disclose that the satellite signals are satellite television signals. Since the system taught by Krasner does provide capability to track and receive two satellite signals and an uplink circuit to send signals up to the satellite (at least FIGs. 1A-B). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system taught by Krasner to receive and send television signals instead of GPS signals for the purpose of reducing the costs of additional hardware (see at least 1:31-44) needed for a consumer ground station.

12. Claims 6 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,825,327 to Krasner in view of U.S. Patent No. 5,355,532 by Kubo et al. ("Kubo").

Claims 6 and 13

Krasner does not specifically disclose *wherein the first processing circuitry includes a satellite television signal demodulator*. In an analogous art, Kubo discloses a tuner-demodulator that is capable of receiving both a general television signal

and satellite broadcast signal in a housing (FIG. 6) that is optimally designed for compactness (see at least 3:14-42).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Kubo's design of the tuner-demodulator in Krasner's system. One of ordinary skill in the art would have been motivated to use Kubo in Krasner in order to first provide Krasner with the capability of receiving satellite television signals and secondly to do so without compromising the compactness and mobility of the Krasner system.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:15 am to 5:35 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status

information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Anthony Nguyen-Ba", written in a cursive style.

**ANTONY NGUYEN-BA
PRIMARY EXAMINER**

December 21, 2006